

APPENDIX B: CLEAN COPY OF CLAIMS

~~128.~~ A plant comprising a cell transformed with a recombinant DNA construct comprising a plant centromere.

~~129.~~ A method of preparing a transgenic plant cell comprising contacting a starting plant cell with a recombinant DNA construct comprising a plant centromere, whereby said starting plant cell is transformed with said recombinant DNA construct.

~~130.~~ The method of claim ~~129~~, wherein said recombinant DNA construct comprises a structural gene.

~~131.~~ The method of claim ~~130~~, wherein the recombinant DNA construct comprises a second structural gene.

~~132.~~ The method of claim ~~129~~, wherein the plant centromere is an *Arabidopsis thaliana* centromere.

~~133.~~ The method of claim ~~132~~, wherein said starting plant cell is an *Arabidopsis thaliana* cell.

~~134.~~ A transgenic plant comprising a minichromosome vector, wherein said vector comprises a plant centromere and a telomere sequence.

~~135.~~ The transgenic plant of claim ~~134~~, wherein said minichromosome vector comprises an autonomous replicating sequence.

~~136.~~ The transgenic plant of claim ~~134~~, wherein said minichromosome vector comprises a second telomere sequence.

~~137.~~ The transgenic plant of claim ~~134~~, wherein said minichromosome vector comprises a structural gene.

11 138. The transgenic plant of claim ~~137~~, wherein said structural gene is selected from the group consisting of an antibiotic resistance gene, a herbicide resistance gene, a nitrogen fixation gene, a plant pathogen defense gene, a plant stress-induced gene, a toxin gene, a receptor gene, a ligand gene and a seed storage gene.

12 139. The transgenic plant of claim ~~137~~, wherein said first exogenous structural gene is selected from the group consisting of a hormone gene, an enzyme gene, an interleukin gene, a clotting factor gene, a cytokine gene, an antibody gene, and a growth factor gene.

13 140. The transgenic plant of claim ~~134~~, wherein said minichromosome vector comprises a second structural gene.

14 141. The transgenic plant of claim ~~134~~, wherein said minichromosome vector comprises a nucleic acid sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9, SEQ ID NO:10, SEQ ID NO:11, SEQ ID NO:12, SEQ ID NO:13, SEQ ID NO:14, SEQ ID NO:15, SEQ ID NO:16, SEQ ID NO:17, SEQ ID NO:18, SEQ ID NO:19, SEQ ID NO:20, and SEQ ID NO:21.

15 142. The transgenic plant of claim ~~134~~, further defined as a dicotyledonous plant.

16 143. The transgenic plant of claim ~~142~~, wherein said dicotyledonous plant is selected from the group consisting of tobacco, tomato, potato, sugar beet, pea, carrot, cauliflower, broccoli, soybean, canola, sunflower, alfalfa, cotton and *Arabidopsis*.

17 144. The transgenic plant of claim ~~143~~, wherein the dicotyledonous plant is *Arabidopsis thaliana*.

18 145. The transgenic plant of claim ~~134~~, further defined as a monocotyledonous plant.

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19 146. The transgenic plant of claim ~~145~~, wherein said monocotyledonous plant is selected from the group consisting of wheat, maize, rye, rice, turfgrass, oat, barley, sorghum, millet, and sugarcane.